

Service Manual

Portable Cassette
RQ-2107A

Portable Cassette Recorder with
Built-in Microphone



This is the Service Manual for the following areas.

☐ For all European areas.
(Only for commodities of non-included AC Adaptor type)
☒ For all European areas.
(Only for commodities of included AC Adaptor type)

RQ-2107 MECHANISM SERIES

Specifications

Power requirement: ☐ ... AC; with optional Panasonic AC adaptor RP-657

☒ ... AC; with included Panasonic AC adaptor RP-64

Battery; 6V (four-R-14 size dry batteries)

Power consumption; 4 W

Car/boat battery; with optional Panasonic car/boat adaptor RP-917

Motor: Mechanical governor motor

Power output: 700mW ... max.

Frequency range: 100 — 7,000 Hz

Operations: Pushbutton one-touch recording with auto-stop mechanism and lockable pause control

Tape speed: 4.8 cm/s (1-7/8 ips.)

Program time: 1 hour with C-60 cassette tape

Fast forward and
rewind time: Approx. 90 seconds with C-60 cassette tape

Track system: 2-track monaural recording and playback

Input: MIC; sensitivity 0.25 mV/applicable microphone
impedance 200 Ω — 600 Ω

Output: Monitor; 8 Ω

Speaker: 8 cm (3") PM dynamic speaker

Dimensions: 14.2 cm (W) \times 6.5 cm (H) \times 25.2 cm (D)
[5-5/8" (W) \times 2-1/2" (H) \times 9-7/8" (D)]

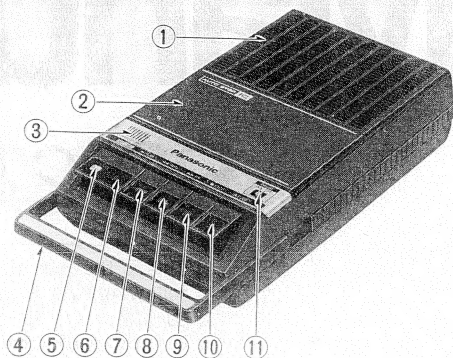
Weight: 1.0 kg (2 lbs, 3 oz), without batteries

Specifications are subject to change without notice.

Panasonic

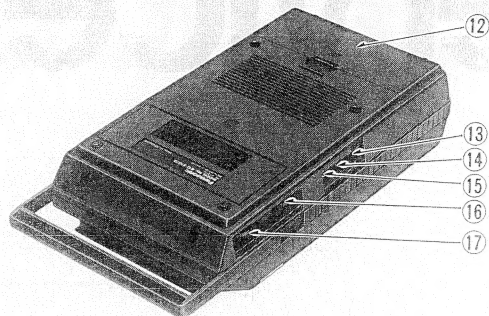
Matsushita Electric Trading Co., Ltd.
P.O. Box 288; Central Osaka Japan

LOCATION OF CONTROLS AND COMPONENTS



- ① Built-in speaker
- ② Cassette compartment cover
- ③ Built-in microphone
- ④ Handle
- ⑤ Record button
- ⑥ Playback button

- ⑦ Rewind button
- ⑧ Fast forward button
- ⑨ Stop button
- ⑩ Eject button
- ⑪ Pause switch
- ⑫ Battery compartment cover



- ⑬ DC IN jack
- ⑭ Monitor jack
- ⑮ External microphone jack
- ⑯ Tone control
- ⑰ Volume control

DISSASSEMBLY INSTRUCTIONS

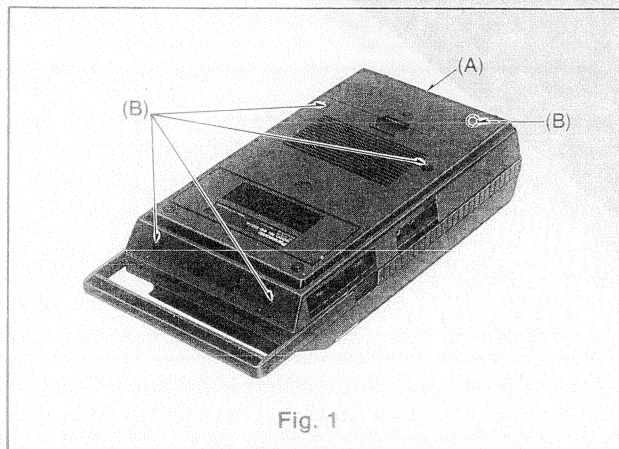


Fig. 1

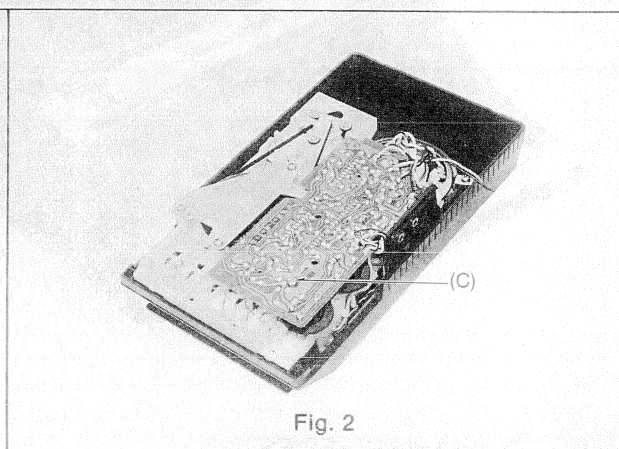
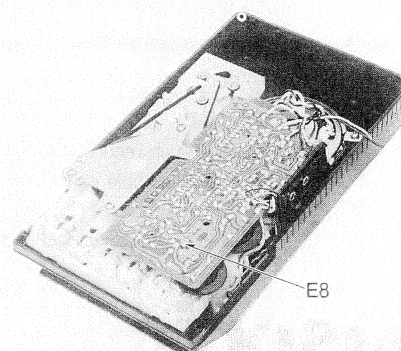
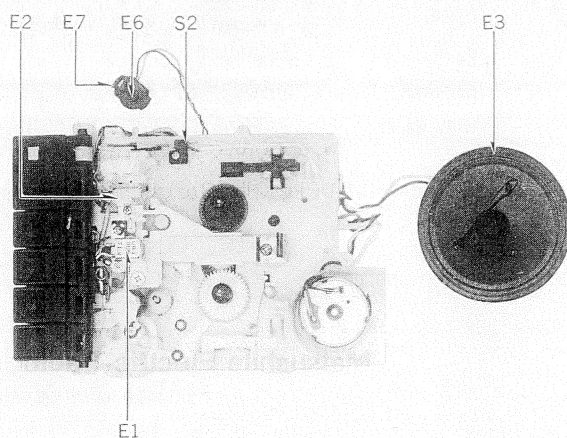
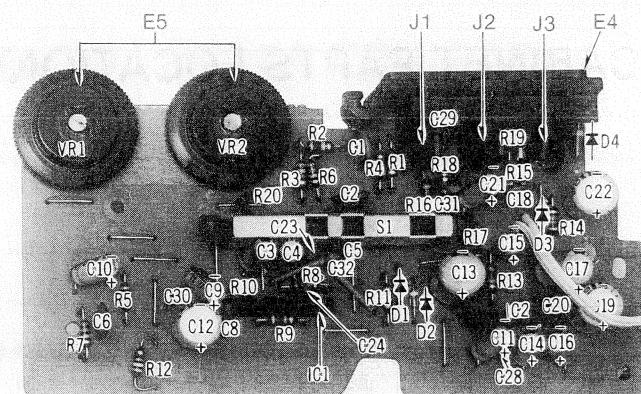


Fig. 2

Procedure	To remove —	Remove —	Shown in fig. —
1	Bottom case	<ul style="list-style-type: none"> • Battery cover (A) • 5 screws (B) 	1
2	P.C.B. and mechanism	<ul style="list-style-type: none"> • 1 screw (C) 	2

ELECTRICAL PARTS LOCATION





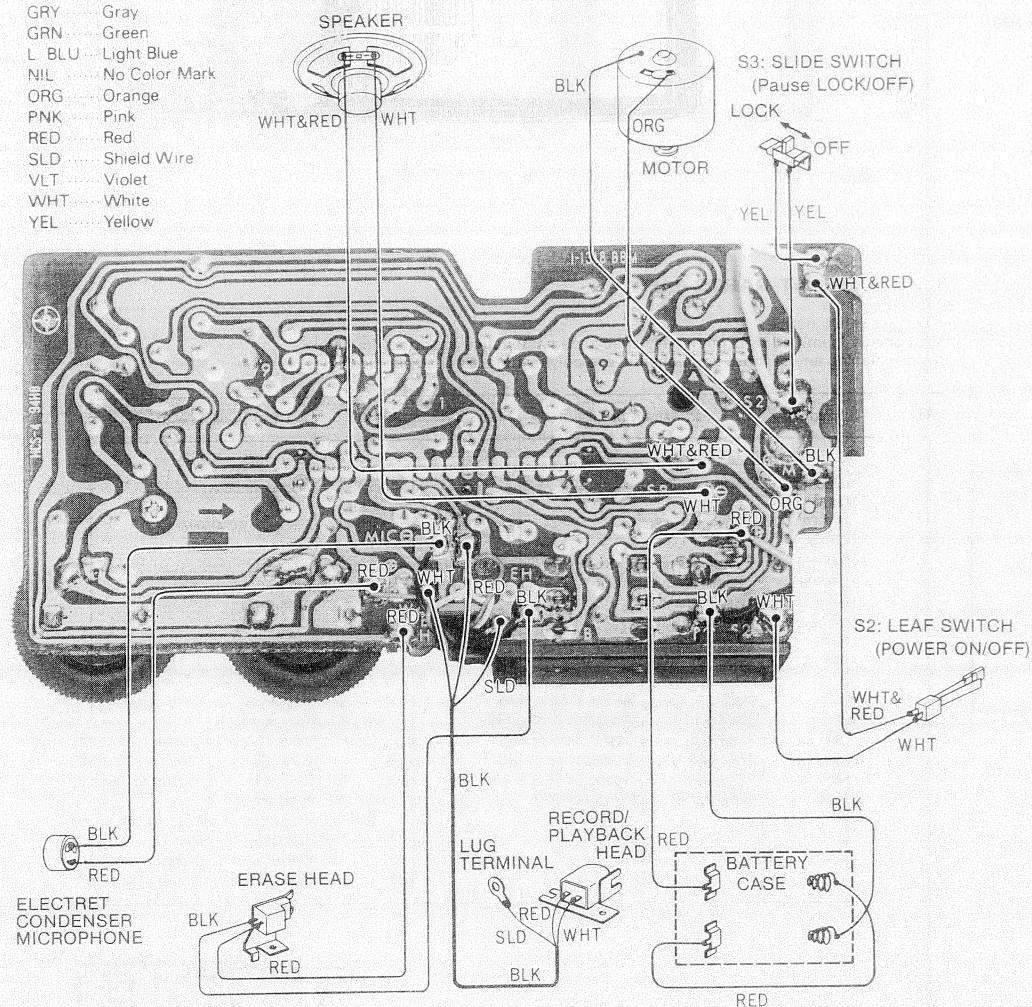
REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
ELECTRICAL PARTS					
E1	QWY0120	Record/Playback Head	E4	QGJK0061	Jack Board
E2	QWY2123	Erase Head	E5	QGT00021	Volume Knob
E3	EAS8P28SE	Speaker	E6	WM034Z	Electret Condenser Microphone
			E7	QBG1616	Microphone Rubber
			E8	XTN3+8B	Tapping Screw 3x8

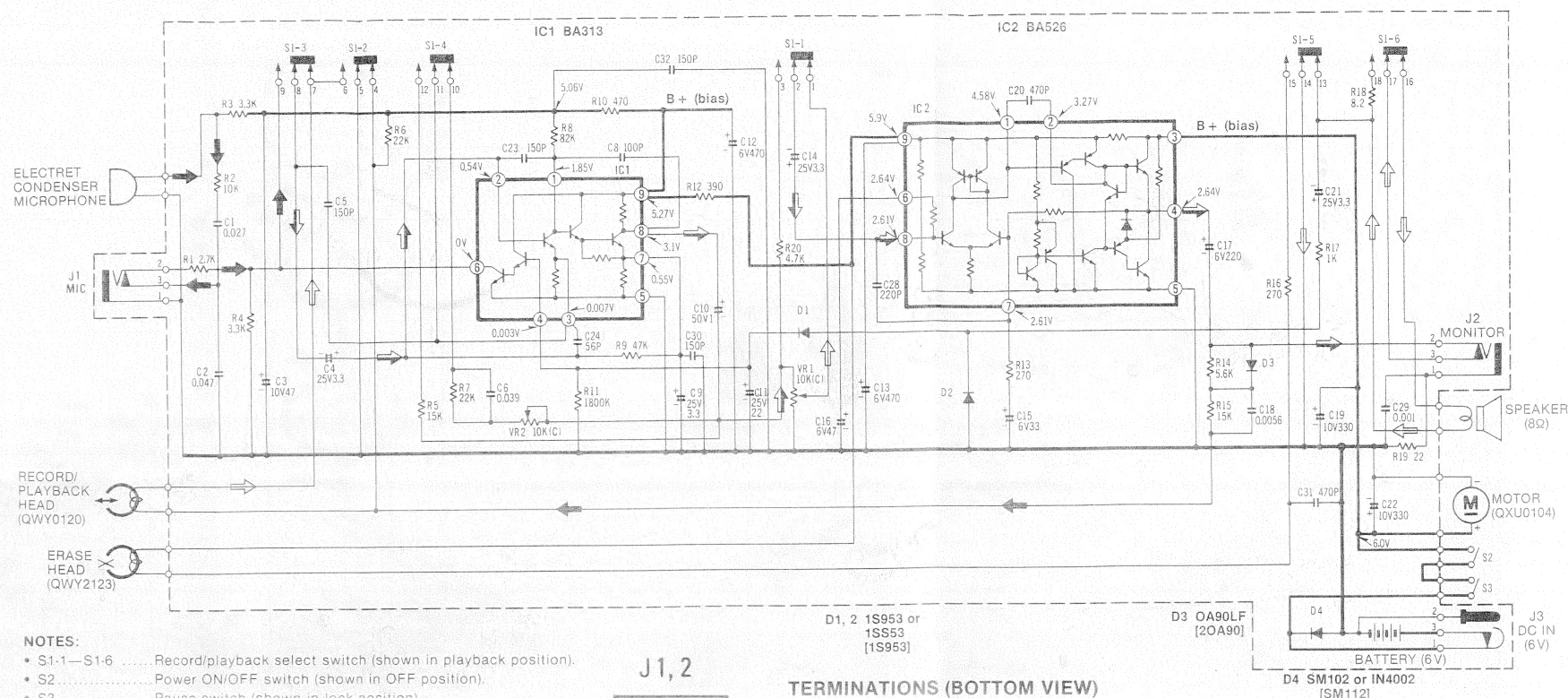
NOTES:

- BLKBlack
- BLUBlue
- BRNBrown
- GRYGray
- GRNGreen
- L. BLULight Blue
- NILNo Color Mark
- ORGOrange
- PNKPink
- REDRed
- SLDShield Wire
- VLViolet
- WHTWhite
- YELYellow

WIRING CONNECTION DIAGRAM



SCHEMATIC DIAGRAM



NOTES:

- S1-1—S1-6Record/playback select switch (shown in playback position).
- S2Power ON/OFF switch (shown in OFF position).
- S3Pause switch (shown in lock position).
- VR1Volume control.
- VR2Tone control.
- Resistance are in ohms (Ω), 1/8 watt unless specified otherwise.
- K = 1,000 Ω .
- Capacity are in microfarads (μ F) unless specified otherwise.
- P = Pico-farads.
- All voltage values shown in circuitry are under no signal condition and record mode with volume control at minimum position.
- For measurement, use VTVM.
- (\rightarrow) this arrow indicates the flow of the playback signal.
- (\leftarrow) this arrow indicates the flow of the recording signal.
- (\rightleftarrows) this arrow indicates the flow of the playback and recording signal in combination.
- Described in the schematic diagram are two type of numbers; the supply parts number and production parts number for diodes.
- One type of number is used for supply parts number and production parts number when they are identical.
- e.g. D4
 { SM102 Production parts number
 { SM112 Supply parts number
- The supply parts number is described alone in the replacement parts list.

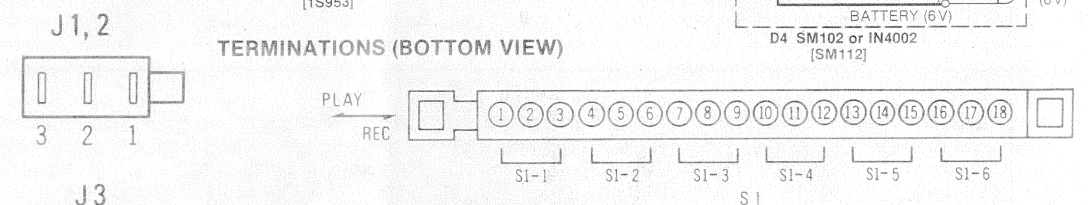
- This schematic diagram may be modified at any time with the development of new technology.

SPECIFICATIONS

Recording bias current	200 \pm 20 μ A
Standard recording input level	MIC: -72 \pm 4 dB at 1 kHz
Overall frequency response	200 Hz: -5 \pm 5 dB 1 kHz: 0 dB 5 kHz: -3 \pm 6 dB
Playback output level	More than 1.7 V
* Use test tape: QZZCFM (315 Hz, 0 dB)	

- Notes: 1. Cut the speaker lead wire.
2. Connect 8 Ω instead of SP.

TERMINATIONS (BOTTOM VIEW)



REPLACEMENT PARTS LIST

NOTES: RESISTORS

- ERDCarbon
- ERGMetal-oxide
- ERSMetal-oxide
- EROMetal-film
- ERXMetal-film
- ERQFuse type metallic
- ERCSolid
- ERFCement

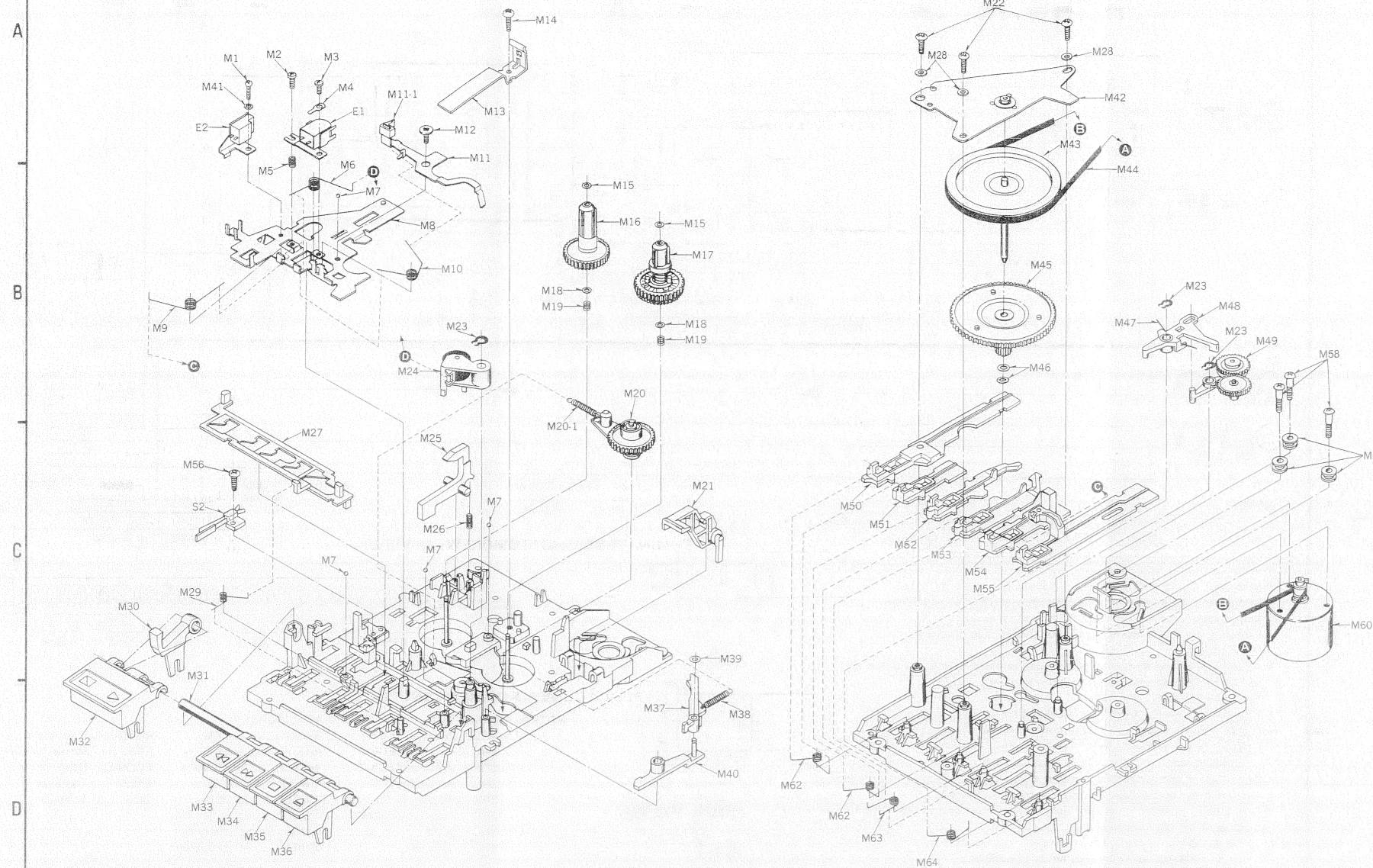
CAPACITORS

- ECBACeramic
- ECGDCeramic
- ECKDCeramic
- ECCDCeramic
- ECFDCeramic
- ECQMPolyester film
- ECQEPolyester film
- ECQFPolypropylene
- ECEDElectrolytic
- ECEDNNon polar electrolytic
- ECQSPolystyrene
- ECSDTantalum
- QCSTantalum

Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.
RESISTORS					
R1	ERD10TJ272	C4	ECEA5023R3	C23	ECKD1H151KB
R2	ERD10TJ103	C5	ECKD1H151KB	C24	ECCD1H560K
R3, 4	ERD10TJ332	C6	ECQM1H393JZ	C28	ECKD1H221KB
R5	ERD10TJ153	C8	ECKD1H101KB	C29	ECKD1H102PF
R6, 7	ERD10TJ223	C9	ECEA5023R3	C30	ECKD1H151KB
R8	ERD10TJ823	C10	ECEA5021	C31	ECKD1H471KB
R9	ERD10TJ473	C11	ECEA1ES220	C32	ECKD1H151KB
R10	ERD10TJ471	C12, 13	ECEA0JS471	DIODES & RECTIFIER	
R11	ERD10TJ185	C14	ECEA5023R3		
R12	ERD10TJ391	C15	ECEA1CS330		
		C16	ECEA1AS470		
		C17	ECEA1AS221	D1, 2	1S953
		C18	ECFDD562KVY	D3	20A90
		C19	ECEA1AS331	D4	SM112
		C20	ECKD1H471KB	INTEGRATED CIRCUITS	
		C21	ECEA5023R3		
		C22	ECEA1AS331		

Ref. No.	Part No.	Part Name & Description
SWITCHES		
S1	QSS6211	Slide Switch (Record/Playback Selector)
S2	QSB0262	Leaf Switch (Power ON/OFF)
S3	ESD4R14171	Slide Switch (Pause LOCK/OFF)
JACKS		
J1, 2	RJJ19ZA-C	M3 Jack (MIC, MONITOR)
J3	QJA0149	DC IN Jack

MECHANICAL PARTS LOCATION



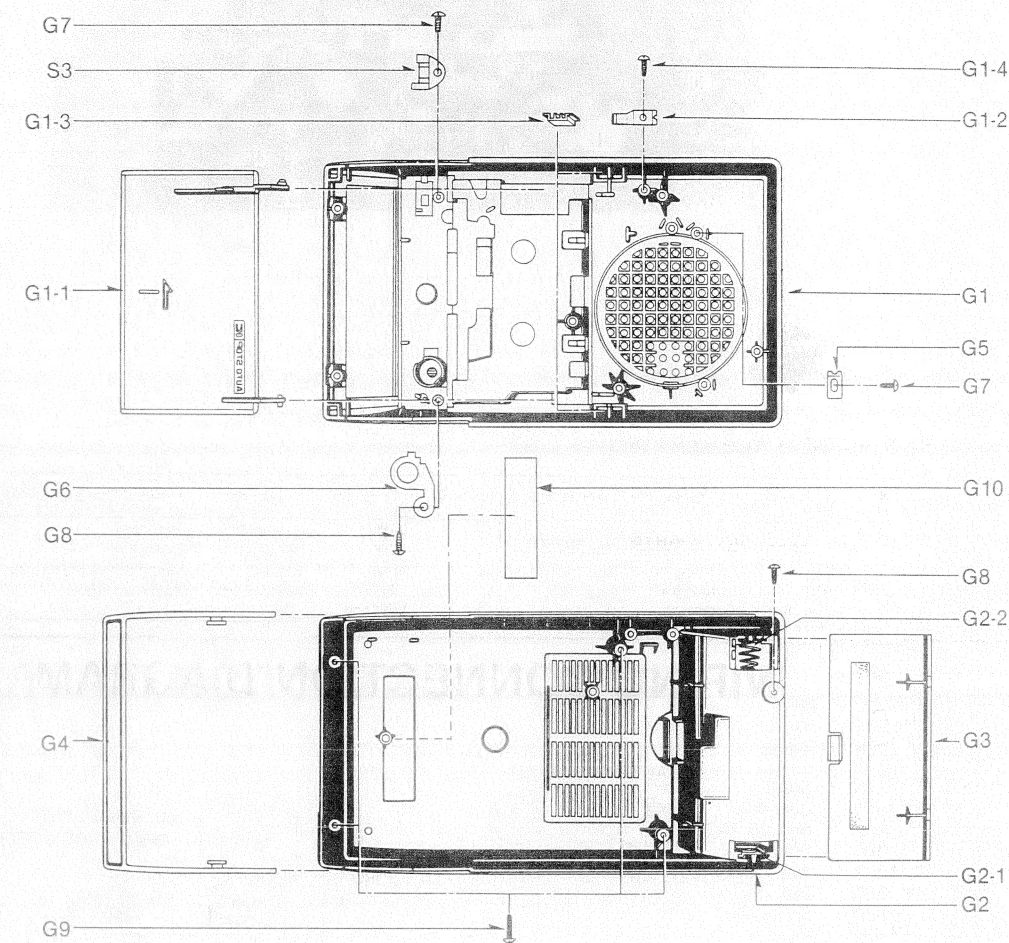
REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
MECHANICAL PARTS			M20	QXL1181	Idle Lever Assembly	M41	XWA26B	Spring Washer
M1	XSN26+4	Screw $\phi 2.6 \times 4$	M20-1	QBT1713	Record Spring	M42	QXH0279	Flywheel Retainer Assembly
M2	XSN2+8	Head Adjustment Screw	M21	QML3311	Cassette-up Lever	M43	QXF0136	Flywheel Assembly
M3	XSN2+5	Screw $\phi 2 \times 5$	M22	XTN3+10B	Tapping Screw $\phi 3 \times 10$	M44	QDB0219	Flywheel Belt
M4	QJT0039	Lug Terminal	M23	XUB4FT	Stop Ring 4ϕ	M45	QDG1140	Gear Pulley
M5	QBC1322	Head Spring	M24	QXL1184	Pressure Roller Lever Assembly	M46	QBJ3220	Washer
M6	QBN1580	Pressure Roller Spring	M25	QML3308	Erase Safety Lever	M47	QBN1582	Fast Wind Lever Spring
M7	QDK1012	Steel Ball 2.5ϕ	M26	QBC1315	Erase Safety Lever Spring	M48	QML3304	Fast Wind Lever-B
M8	QMK1719	Head Base Plate	M27	QXR0395	Lock Plate Assembly	M49	QXL1186	Fast Wind Lever-A Assembly
M9	QBN1581	Base Plate Spring	M28	XWG3	Washer	M50	QMR1661	Eject Rod
M10	QBN1586	Auto-Stop Detect Spring	M29	QBN1587	Lock Plate Spring	M51	QMR1767	Stop Rod
M11	QXL1183	Auto-Stop Detect Lever Assembly	M30	QGO1440	Record Button	M52	QMR1659	Fast Wind Rod
M11-1	QBJ1538	Detecting Piece	M31	QMN2322	Button Shaft	M53	QMR1658	Rewind Rod
M12	QHQ1253	Stop Screw	M32	QGO1435	Playback Button	M54	QMR1656	Playback Rod
M13	QBP1798	Base Plate Retainer Spring	M33	QGO1437	Rewind Button	M55	QXR0386	Record Rod Assembly
M14	XTN3+8B	Screw $\phi 3 \times 8$	M34	QGO1438	Fast Forward Button	M56	XTN26+8B	Tapping Screw $\phi 2.6 \times 8$
M15	QBW2008	Snap Washer	M35	QGO1433	Stop Button	M58	QHQ1309	Step Screw
M16	QDR1121	Supply Reel Table Assembly	M36	QGO1439	Eject Button	M59	QBG1420	Motor Cushion
M17	QXD0090	Takeup Reel Table Assembly	M37	QML3307	Auto-Stop Driving Pawl	M60	QXU0111	Motor Assembly(with Motor Pulley)
M18	QBJ3224	Washer	M38	QBT1846	Auto-Stop Spring	M62	QBN1583	Rod Release Spring
M19	QBC1272	Back Tension Spring	M39	QBW2046	Washer	M63	QBN1584	Playback Rod Spring
			M40	QML3305	Auto-Stop Driving Lever	M64	QBN1585	Record Rod Spring

SPECIFICATIONS

Pressure of pressure roller	390 \pm 60 g
Takeup tension * Use cassette torque meter ... QZZSRKCT	50 \pm 20 g
Wow and flutter: JIS * Use test tape ... QZZCWAT	Less than 0.4% (RMS)

CABINET PARTS LOCATION



REPLACEMENT PARTS LIST

Important safety notice
Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
CABINET PARTS			ACCESSORIES		
G1	QYM0581W	Main Case Assembly	A1	Δ QQT4R3339	Instruction Book
G1-1	QKFK0039	Cassette Lid	*For all European areas.		
G1-2	QBP1552	Cassette Lid Spring	(Only for commodities of non-included AC Adaptor type)		
G1-3	QBJ1338	Cassette Lid Holder	Δ QQT4R3325		
G1-4	XTN3+8B	Tapping Screw $\phi 3 \times 8$	*For all European areas.		
G2	QYM4R0859K	Bottom Case Assembly	(Only for commodities of included AC Adaptor type)		
G2-1	QJB0111	Battery Terminal	A2	Δ RP64E	AC Adaptor
G2-2	QBN8007	Battery Spring	*For all European areas.		
G3	QYFK0077	Battery Cover Assembly	(Only for commodities of included AC Adaptor type)		
G4	QYH0079	Handle Assembly	PACKINGS		
G5	QKT1172	Speaker Holding Metal	P1	Δ QPN4R4354	Inside Carton
G6	QMF2105	Microphone Holding Plate	*For all European areas.		
G7	XTN3+6B	Tapping Screw $\phi 3 \times 6$	(Only for commodities of non-included AC Adaptor type)		
G8	XTN3+8B	Tapping Screw $\phi 3 \times 8$	P2	QPCK0008	Poly Sheet (for UNIT)
G9	XTN3+16B	Tapping Screw $\phi 3 \times 16$	P3	Δ QPA4R0694	Pad (for AC Adaptor)
G10	QGS4R2774	Main Name Plate	*For all European areas.		
			(Only for commodities of included AC Adaptor type)		
			P4	QPSK1075	Pad
			P5	QPAK1064	Cushion
			P6	XZB26X36A02	Poly Bag (for UNIT)